APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,064	08/22/2003	Paul Moroney	D03037	9712

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EXAMINER
TRAN, ELLEN C

ART UNIT	PAPER NUMBER
2433	

NOTIFICATION DATE	DELIVERY MODE
05/05/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

	Application No.	Applicant(s)
Office Action Summary	10/647,064	MORONEY ET AL.
	Examiner	Art Unit	
	ELLEN TRAN	2433	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>8 February 2010</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>30-52</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>30-52</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Detailed Action

1.   This action is responsive to communication filed on: 8 February 2010 with

acknowledgement of an original application filed on 22 August 2003 and acknowledgement of

priority date of 23 August 2002 based on provisional application filing of 60/405,537.

2.   Claims 30-52, are pending; claims 30, 41, and 47 are independent claims. Claims 30-52

are new. Claims 1-29 have been canceled. Amendments to the claims are accepted.

Response to Arguments

3.   Applicant's arguments filed 8 February 2010 have been fully considered however they

are not persuasive or moot due to new grounds of rejection below.

I)   In response to Applicant's argument beginning on page 8, *"Neither Candelore*

(6,697,489)(Candelore '489), Candelore (2003/0188162)(Candelore '162) nor Craft, taken

alone or in combination disclose or suggest the claimed invention recited by the above amended

claims. Neither Candelore '489 nor Craft appear to be related to interchip data protection.

Candelore '489 is primarily concerned with an ability to update and access control system, and

proposes to do so by essentially downloading scrambled and encrypted control system, and

proposes to do so by essentially downloading scrambled and encrypted control words to a

conditional access system ... Candelore '489 merely discloses to use a smart cart to provide

secure control words for scrambled digital content by using encrypted control words which are

decrypted by a key in the descrambler".

        The Examiner disagrees with argument. Candlore '489 is relevant art for multiple

reasons. One it utilizes at least one smart card as well as a conditional access device that utilizes

CA module to produce ciphertext content as well as decrypt ciphertext content to produce

plaintext. In addition Applicant's disclosure teaches the preferred embodiment as well as

alternative embodiments are a conditional content protection scheme used with set top box as

well as set top box with smart cards see paragraphs 15 and 38. Therefore Candelore(s) are

relevant art because they all deal with a content protection scheme for set-top boxes with smart

cards.

II)   In response to applicant's argument beginning on page 9, *"Craft also is not principal*

concerned with interchip security"

This argument is moot because the below rejection utilizes a prior art reference teaching

interchip security, see the Coli reference below.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent
> therefor, subject to the conditions and requirements of this title.

5.   Claims 47-52, are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. Independent claim 47 is directed to "a computer readable

medium" it is noted that a 'computer readable medium is interpreted as non-statutory subject

matter. Computer readable mediums can be in the form of "signals" or "carrier waves" which

are not statutory. Accordingly, Claims 47-52 fails to recite statutory subject matter, as defined in

35 U.S.C. 101.

Claim Objections

6.   Claims 30-52 are objected to because of the following informalities: According to 37

CFR 1.75 Claims (g) and MPEP 608.01(e) [R-3] the independent claims should be presented in

order, with the least restrictive claim to be presented as claim number 1. In the interest of

compact prosecution the Examiner finds Applications with the claims presented in the proper

order make it easier to determine allowable subject matter. Independent claims 41 and 47 are

less restrictive than claim 30. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject matter
> sought to be patented and the prior art are such that the subject matter as a whole would have
> been obvious at the time the invention was made to a person having ordinary skill in the art
> to which said subject matter pertains. Patentability shall not be negatived by the manner in
> which the invention was made.

8.   **Claims 30-52,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Coli U.S.

Patent No. 5,452,355 (hereinafter '355) in view of Candelore U.S. Patent No. 6,697,489

(hereinafter '489).

        As to independent claim 30, "A content processing unit for protecting interchip

content pathways transporting content, the content processing unit comprising: a first chip

package which receives content, wherein the first chip package comprises: a first body, an

encryption engine, and a first key storage register capable of storing an interchip key,

wherein:" is taught in '355 col. 1, lines 45-59;

        "the first key storage register is non-readable from outside the first body, and" is

shown in '355 col. 2, lines 3-25;

"**the first key storage register cannot be overwritten after a programmability period**" is disclosed in '355 col. 4, lines 8-52;

the following is not explicitly taught in '355:

"**the interchip key is used by the encryption engine to produce ciphertext content from the received content**" however '489 teaches that encryption engines with interchip keys are used to produce ciphertext context in col. 5, lines 57-62;

"**the programmability period being a period in which the interchip key is loaded in the first key storage**" however '489 teaches that these interchip keys are programmed at the time of manufacture in col. 7, lines 1-10;

"**a second chip package, wherein the second chip package comprises: a second body, a decryption engine, and a second key storage register capable of storing the interchip key, wherein: the interchip key is used by the decryption engine to produce plaintext content from the ciphertext content received from the first chip package, and the second key storage register is non-readable from outside the second body, the second key storage register being writeable while being non-readable; and an interchip content pathway connecting the first chip package and the second chip package within said content processing unit, the interchip content pathway carrying the ciphertext content from the first chip package to the second chip package; and an output configured to provide the plaintext content to a user device capable of providing content to a user**" however '489 teaches a smartcard (i.e. second chip package) is used with a conditional access module to decrypt content received and how the secure content is protected by using the secure keys in col. 6, lines 27-58.

It would have been obvious to one of ordinary skill in the art at the time of the invention

of a tamper protection cell taught in '355 to utilize the tamper protection cells in a traditional

conditional access system such as television distribution. One of ordinary skill in the art would

have been motivated to perform such a modification because smartcards (i.e. tamper protection

cells use with the distribution of television content is well known in the prior art see '489 (col. 2,

line 45 through col. 3, line 9).

**As to dependent claim 31, "further the first chip package includes a fusable link,
wherein the first key storage register cannot be overwritten after the fusable link is
activated"** is taught in '355 col. 4, lines 8-52.

**As to dependent claim 32, "wherein the programmability period ends after writing
to the first key storage register"** is shown in '490 col. 7, lines 1-10.

**As to dependent claim 33, "wherein at least one of the first and second chip
packages comprises a plurality of semiconductor substrates"** is disclosed in '355 col. 1,
lines 31-37 and col. 4, lines 40-42.

**As to dependent claim 34, wherein: the first chip package further stores a key
encryption key, the interchip key is encrypted with the key encryption key, and the second
chip package obtains the interchip key by decrypting the interchip key using the key
encryption key"** is taught in '489 col. 6, lines 27-36, note the second chip package in this
embodiment is interpreted to be the unique descrambler IC key stored in register 450, and the
first chip package is the smartcard.

**As to dependent claim 35, "further comprising a plurality of content processing chip
packages, each content processing chip package of the plurality of content processing chip**

packages having a unique key as the key encryption key, the unique key of each content

processing chip package being distinct from the unique key of each other content

processing chip package" is shown in '489 col. 7, lines 11-19, note because it is a

manufacturing process there are a plurality of smart cards that are paired with a respective

plurality of to a specific host Descrambler IC.

As to dependent claim 36, "wherein each of the plurality of content processing chip

packages receives a ciphertext message and obtains a unique interchip key by using the

unique key to decrypt the message, the unique interchip key of each content processing

chip package being distinct from the unique interchip key of each other content processing

chip package" is taught in '489 col. 7, lines 15-20.

As to dependent claim 37, "wherein the second key storage register is overwritable"

is shown in '489 col. 7, lines 15-20.

As to dependent claim 38, "wherein: the second chip package further comprises a

second encryption engine, and the second encryption engine uses the interchip key or

another key that is a function of the interchip key" is taught in '489 col. 7, line 59 through

col. 8, line 19.

As to dependent claim 39, "further comprising a third chip package comprising a

second interchip key that can decrypt second ciphertext content produced with the second

encryption engine at the second chip package" is shown in '489 col. 7, lines 59-65.

As to independent claim 40, "wherein the third chip package is connected to the

second chip package by a second interchip content pathway, the second interchip content

pathway carrying the second ciphertext content from the first chip package to the second chip package" is taught in '489 col. 7, lines 15-20, i.e. third equivalent to replaced.

　　　As to independent claim 41, **"A method for protecting interchip content pathways transporting content within a content processing unit, the method comprising steps of: loading an interchip key into a first key storage register in a first chip package, wherein the interchip key in the first key storage register is non-readable from outside the first chip package"** is taught in '355 col. 1, lines 45-59;

　　　"activating a feature of the first chip package that prevents overwriting the interchip key in the first key storage register from outside the first chip package" is disclosed in '355 col. 4, lines 8-52;

the following is not explicitly taught in '355:

　　　"after a period in which the first key is loaded in the first key storage" however '489 teaches that these interchip keys are programmed at the time of manufacture in col. 7, lines 1-10;

　　　"encrypting digital content with the interchip key to produce ciphertext content" however '489 teaches that encryption engines with interchip keys are used to produce ciphertext context in col. 5, lines 57-62;

　　　"coupling the ciphertext content from the first chip package to a content pathway" however '489 teaches coupling chip packages in a content pathway, i.e. interface in col. 5, line 65 through col. 6, line 4.

　　　"loading the interchip key into a second key storage register in a second chip package, wherein the interchip key in the second key storage register is non-readable from outside the second chip package, the second key storage register being writeable while

being non-readable; coupling the ciphertext content from the content pathway to a second

chip package; and decrypting the ciphertext content with the interchip key to reformulate

the digital content" however '489 teaches a smartcard (i.e. second chip package) is used with a

conditional access module to decrypt content received and how the secure content is protected by

using the secure keys in col. 6, lines 27-58.

It would have been obvious to one of ordinary skill in the art at the time of the invention

of a tamper protection cell taught in '355 to utilize the tamper protection cells in a traditional

conditional access system such as television distribution. One of ordinary skill in the art would

have been motivated to perform such a modification because smartcards (i.e. tamper protection

cells use with the distribution of television content is well known in the prior art see '489 (col. 2,

line 45 through col. 3, line 9).

As to dependent claim 42, **"further comprising steps of: loading a key encryption**

key into the first chip package; and decrypting the interchip key with the key encryption

key, whereby the interchip key is protected with the key encryption key outside the first

chip package" is taught in '355 col. 1, lines 56-59.

As to dependent claim 43, **"further comprising a step of overwriting the interchip**

key in the second key storage register from outside the second chip package" is shown in

'489 col. 7, lines 15-19, overwriting same as replaced or changing keys to new host.

As to dependent claim 44, **"further comprising steps of: encrypting the digital**

content in the second chip package to produce second ciphertext content using a second

interchip key, coupling the second ciphertext content to a second content pathway" is

disclosed in '489 col. 5, line 63 through col. 6, line 5.

      As to dependent claim 45, "further comprising: providing a unique interchip key to each of a plurality of content processing chip packages, the unique interchip key of each content processing chip package being distinct from the unique key of each other content processing chip package and protecting a respective content pathway to each content chip processing package" is shown in '489 col. 7, lines 11-19, note because it is a manufacturing process there are a plurality of smart cards that are paired with a respective plurality of to a specific host Descrambler IC.

      As to dependent claim 46, "wherein the step of providing a unique interchip key includes providing a message to each of the plurality of content processing chip packages, and each content processing chip package decrypts the message to obtain a unique interchip key" is disclosed in '489 col. 7, lines 15-19.

      As to independent claim 47, this claim is directed a computer readable medium containing instructions for a computer to perform a method of independent claim 41; therefore it is rejected along similar rationale.

      As to dependent claims 48-52, these claims contain substantially similar subject matter as claims 42-47; therefore they are rejected along similar rationale.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

9.   It is noted, PATENTS ARE RELEVANT AS PRIOR ART FOR ALL THEY CONTAIN

"The use of patents as references is not limited to what the patentees describe as their own

inventions or to the problems with which they are concerned. They are part of the literature of

the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039

(Fed. Cir. 1983) (quoting   In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA

1968)).   A reference may be relied upon for all that it would have reasonably suggested to one

having ordinary skill the art, including nonpreferred embodiments (see MPEP 2123).

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ellen C Tran whose telephone number is

 (571) 272-3842. The examiner can normally be reached from 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Krista Bui can be reached on (571) 272-7291. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ELLEN TRAN/
Primary Examiner, Art Unit 2433
30 April 2010